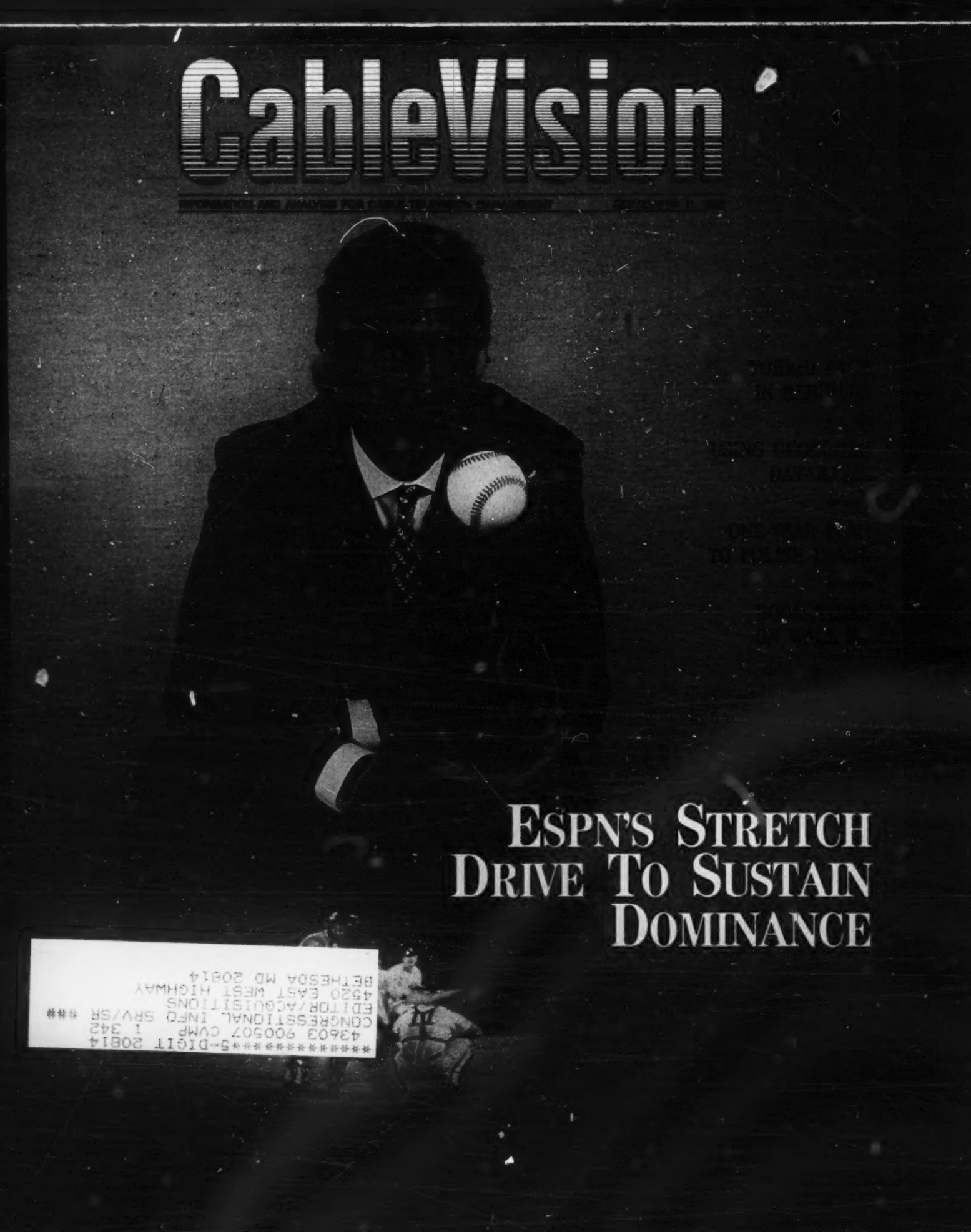
CableVision

INFORMATION AND ANALYSIS FOR CABLE TELEVISION MANAGEMENT



ESPN'S STRETCH DRIVE TO SUSTAIN DOMINANCE

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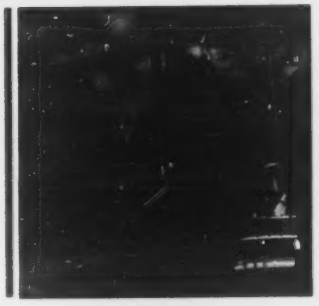

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ABP BPA

To solve the PPV puzzle, cable must play technical and financial hardball

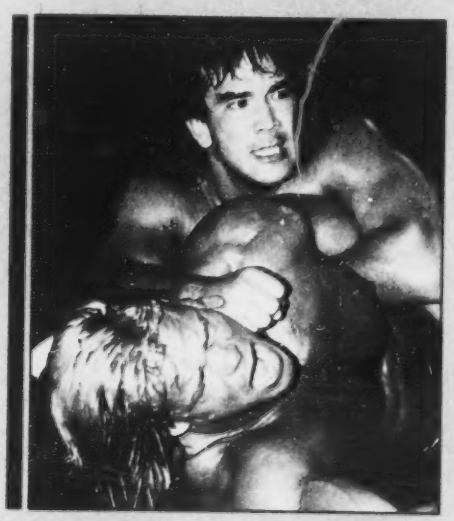
By Fred Dawson

What ails pay per view? Depending on whom you talk to, the perspective on PPV is either that it hasn't lived up to its promise, and may never, or that it's going through a gestation period where the promise is certain to be realized—it's just a matter of a little more time.

But there's no denying the obvious. After 10 years of talk and development, PPV is still a long way from fulfilling the rosy vision that embellished franchise proposals deposited with cities across the nation in the first part of this decade. Out of 50 million cabled households, between 34 million and 38 million, depending on whose estimates you cite, are inaccessible to pay-per-view services, which is to say, they're unaddressable.

Theories abound. It's the unfriendly set-top addressable box. It's Hollywood's lack of cooperation. It's the operational hassles of order taking, billing and continuous marketing. It's the low margin.

But one thing is for certain. PPV's slow takeoff is not a function of public indifference to on-demand motion picture viewing in the home. With PPV hovering around the $180 million annual revenue mark, total revenues for sales and rentals of movie cassettes are expected to hit $9 billion this year, according to an estimate by the Video Software Dealers Association, outstripping both pay TV and box office receipts.



Operators could lose to home video now—and telcos later—if they don't grip PPV's potential, like these *Halloween Havoc* wrestlers

■

But in some cable operators' eyes, the success of home video only points to the futility of the electronic video store agenda. To the die-hard naysayers who never did believe PPV had anything to offer, including some of the most powerful MSO executives, the present state of affairs should be the final word on the subject. It didn't pan out, and it never will. "Unless you're stuck with a foolish decision made early on," says John Sie, senior vice president at TCI, "it's not an economical business. You must look at the bottom line, because this is a pretty transactional business."

But to a swelling contingent of system managers, marketing executives, hardware vendors, programming suppliers, impresarios and—who knows?—maybe even customers, PPV has reached the point of critical mass, where a combination of many factors, each with its own gathering momentum, will push PPV to fulfillment at the leading edge of the '90s era in television entertainment, no matter what the naysayers do or don't do.

One such realist—they don't think of themselves as visionaries—is Hal Krisbergh, president of the Jerrold Division of General Instrument Corp. While Krisbergh, who oversaw the startup of Cable Video Store in 1985, acknowledges that PPV has

Editor's Note: Due to a printing error, one page of this article was dropped from the Aug. 28 issue. It is herewith printed in its entirety.

Pay-Per-Viewpoints

'Unless you're stuck with a foolish decision made early on, it's not an economical business. You must look at the bottom line, because this is a pretty transactional business.'

— John Sie, senior vice president of TCI

■

'It's very clear that PPV is moving at 90 miles per hour. Everyone is looking at it. It's not just another movie service. It's event programming, it's concerts, it's boxing, it's Playboy, it's the *Moscow Peace* concert. There's no one I know who doesn't believe in it. Even John Sie believes event PPV is a business.'

— Hal Krisbergh, president of the Jerrold Division of General Instrument Corp.

■

'We like the business, and it makes us a lot of money.'

— Lowell Hussey, Warner Cable senior vice president for sales, marketing and programming

■

'What we've found is that much of the PPV success is due to pre-sold events because people already know about them. If we watch our marketing budget, PPV is a money-maker for us. But (in movies) we're getting all re-runs and there's not much sizzle left after first running. You look at movies as purely an alternative to events and you must be very cost-effective with your marketing budget for one movie.'

— Susan Yee, vice president of Twin County Transvideo in Northampton, Pa., which boasts one of the longest-running PPV businesses in the industry.

■

'We could sell a lot of these (off-premises) units. Operators are clamoring for off-premises gear. But we're holding back until we're confident the product is as good as it can be.'

— David Fellows, Scientific-Atlanta vice president of distribution products

■

reached critical mass about a year later than he anticipated, the fact that the moment has arrived ensures PPV is headed for high orbit.

"It's very clear that PPV is moving at 90 miles per hour," he said. "Everyone is looking at it. It's not just another movie service. It's event programming, it's concerts, it's boxing, it's Playboy, it's the *Moscow Peace* concert. There's no one I know who doesn't believe in it. Even John Sie believes event PPV is a business."

Indeed, of late the event phenomenon has been crucial to the current of optimism, such as it is, that surrounds PPV. No greater testament to the faith in event potential to drive PPV can be found than that of the managers of Cox Cable's San Diego operation, where $20 million is being spent on 180,000 new Pioneer addressable converters against a backdrop of dwindling revenues for motion picture PPV.

The last thing the industry should have PPV concerns over is addressability approaches, says Jerrold President Hal Krisbergh

■

Cox, which has been in the PPV business in San Diego for most of this decade, reports overall revenues have reached $32 per year per addressable subscriber, with the ratio of PPV to pay revenues in addressable homes now at $1:$5, versus $1:$20 five years ago. But recently the ongoing PPV surge has been tied to special events, baseball and adult films, with standard motion picture fare dropping from a peak of $7.10 per addressable sub in 1987 to $4.75 this year.

In a presentation of these figures at a symposium on PPV sponsored by QVP Publishing Inc. and reported in *Variety* on Aug. 10, Cox's vice president of marketing for the San Diego system, Art Reynolds, excoriated the motion picture studios for doing a "superb job of screwing up the PPV movie business." With the various boycotts by major studios of some satellite-delivered and, even, standalone PPV services and a general lengthening of windows between home video distribution and PPV release to an average of over 50 days, Reynolds is not alone in citing Hollywood as the PPV spoiler.

To Marvin Jones, president and CEO of UAE Cablesystems, the movie issue is a life or death one for PPV. "The studios are careful," he says. "They don't want to hurt videocassette rentals, and right now they give PPV somewhat of a chance. I think the window issue will make or break PPV. If we can't get the windows changed, it won't work out."

Maybe not. But there are many operators with film-based PPV up and running who, while acknowledging the studios are making life difficult, see no reason to panic. Lowell Hussey, Warner Cable's senior vice president for sales, marketing and programming, when asked why his company has gone from a PPV base of two or three systems in 1978 to offering it in virtually all systems on an addressable foundation of 800,000 subscribers, comments, "We like the business, and it makes us a lot of money."

There's no magic to Warner's approach—just one Request channel and one Viewer's Choice plus a barker channel shapes most of the PPV operations. But the business is on a fast growth curve in Hussey's estimation, having gone from about $15 per addressable sub per year two years ago to $30 today and headed for $36 next year and "the low 40s" two years from now.

Telecable, too, has made a business of PPV, no frills, straight off the satellite, selling into an addressable universe that represents 70 percent of its 580,000-

subscriber base. According to Charles Kennamer, engineering manager of addressable technology, the goal from the start was to create a smooth, easy-to-run business. It took trial and error to get to a relatively hassle-free, ANI-based operation, but, today, Kennamer says, "We're happy with it. We've got it running, and now we can kick back and hope it continues to generate some revenues."

But unlike Hussey, Kennamer doesn't see major growth ahead for the two Viewer's Choice/one barker channel combo that comprises Telecable's PPV operations. "From the outset, we positioned this as a relatively small incremental business," he says. In fact, he adds, it would be a much harder choice to go into PPV if Telecable hadn't built an addressable base of Zenith converters starting in the early '80s.

Indeed, what is a hassle-free, incremental business in the operational milieu of one MSO is a conundrum of low-return, time-consuming fits and starts for another. At Continental Cablevision, Programming VP Ted Livingston views PPV as three separate businesses—boxing and wrestling, smaller events and movies—where the latter two of the three are struggling. "Frankly, it's been disappointing," he comments. "We haven't gotten the movies we feel we should have. The operators tend to be enthusiastic at first, but when results don't measure up, they get discouraged. The studios are not taking steps to invest in PPV. They are being strongly influenced by video store people. We have a ways to go with PPV and need some good experiences."

Nevertheless, there is another side of the coin, as Livingston acknowledges. "It's probably fair to say that the cable industry could make a more concerted effort with PPV," he says, noting, for example, that "what TCI says carries a lot of weight, especially if they say PPV is a questionable revenue stream."

If, as JoAnne Abbey, ATC's director of marketing, contends, "the costs of addressability continue to be very high and its growth the next five years will lag significantly behind VCR growth," how much blame can cable operators lay at the feet of Hollywood for the studios' swing toward greater support for home video? There's no better bellwether around than ATC when it comes to marking which falls off the PPV fence first, the chicken or the egg. "Our policy has been to roll out addressability at a moderate rate and not go fully forward," Abbey says. "Operationally, our systems have been slow to implement new automation until the market demands it."

According to informed sources, the second-ranking MSO will be moving even more slowly in the immediate future, owing to a decision to peg expansion of addressability to development of off-premises technology. "You don't have much sympathy for PPV at the top there," notes one close observer of ATC's thinking. "(Chairman and CEO Joe) Collins has an outspoken history of opposition to the concept. The position now seems to be, 'Show me a distribution approach that works, and maybe we'll go for it.'"

In a paper written for a technical session at the NCTA convention in Dallas this past May, ATC's James Chiddix, senior vice president of engineering, and David Pangrac, director of technological development, offer this insight into their company's thinking:

"The original dream of addressability encompassed automated delivery of multi-pay and pay-per-view, operating savings from reduced truck rolls, reduced converter losses, and the ability to market more flexibly. In retrospect, we see a number of unanticipated problems. Addressability introduced additional layers of complexity to virtually all operational aspects of our systems, and there were varying degrees of success in coping with this...."

But, if ATC's experience makes it wary of addressability, its sensitivity to potential trends in television distribution have kept the door ajar on the technology. "The experience of a number of operators indicates that there is additional revenue available from pay-per-view, although the magnitude remains unclear," the two engineering executives say. "In addition, our most likely long-term competitors, who will employ direct broadcast satellites and switched telco delivery systems, may well be capable of pay-per-view delivery to all of their subscribers. Thus, to the extent that pay-per-view offers things that

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— Charles Kennamer, Telecable engineering manager of addressable technology

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'We keep looking at (off-premises addressability). The concept sounds great, but, first of all, we wonder how, given the costs involved, this is going to cut into the existing base of boxes. And there are other things that hurt off-premises, such as the placement of active electronics out in the environment, the cost of adding ports to households that never subscribe and the fact that current interdiction systems are limited to 300 MHz.'

— Vito Brugliera, marketing vice president for Zenith's Cable Products Division

■

'I think PPV in the last year has really started to take off. When we began these services, the people we talked to were system managers. Now we're talking to MSO managers about large-scale contracts.'

— Catherine Kinney, product manager for Ameritech's CATV Order Entry business

■

'Frankly, it's been disappointing. We haven't gotten the movies we feel we should have. The operators tend to be enthusiastic at first, but when results don't measure up, they get discouraged. The studios are not taking steps to invest in PPV. They are being strongly influenced by video store people. We have a ways to go with PPV and need some good experiences.'

— Ted Livingston, Continental Cablevision vice president of programming

■

consumers want, our moving away from addressable technology may put us at a competitive disadvantage."

In suggesting that off-premises addressability might be the answer, ATC executives are part of a growing consensus that the time has come to rethink to-the-home distribution topology, no matter what disasters such thinking has led to in the past.

To succeed, engineers note, off-premises technology must deliver all channels that the home is authorized to receive in broadband, unscrambled format compatible with cable-ready sets and VCRs. Whatever the process of signal selection, whether its interdiction of unauthorized signals via frequency agile oscillators at the tap or automated positive and negative trapping in a wall-mounted unit outside the home, the process must be simple, well protected from the environment and easy and inexpensive to power.

PPV UNIVERSE GROWTH

Year	PPV-Cable Homes
1988	10.3 million
1987	11.5 million
1988	14.0 million
1989	16.9 million
1990 (forecast)	20.3 million
1995 (forecast)	40.5 million

Source: Paul Kagan Associates

This is a tall order, and, so far, the industry is a long way from meeting it. Jerrold has been working closely with TCI in its efforts to develop a house-mounted trapping system, and, according to Krisbergh, a product is six months or more away. Scientific-Atlanta is installing the first field test units, in the Warner Cable system in Williamsburg, Va., and, according to David Fellows, vice president of distribution products at S-A, it will be a year or more before the system is ready for mass production. "We could sell a lot of these units," Fellows says. "Operators are clamoring for off-premises gear. But we're holding back until we're confident the product is as good as it can be."

According to Rob Moel, project manager for the test in Williamsburg, a key potential advantage of off-premises technology is the ability to sell PPV to non-subscribers. The Warner strategy is to begin "hard wiring" homes so that, once in, a drop is left in, no matter whether residents continue to subscribe. Permanent installation has the advantage of affording better protection for drop cable and connections and allowing non-subscribers the option to occasionally order PPV services without signing up for basic.

The off-premises test will run for a year, Moel says, and involves 250 of the system's 2,500 subscribing households. If it passes muster, Warner intends to move forward with an aggressive installation strategy companywide. In Hussey's opinion, this could spring PPV loose to the next level, where more channels would be allocated and new types of services, such as HDTV, could be introduced. "When HDTV comes along," notes Moel, "there will not be any impedance to putting it on as a PPV service, using this technology."

But such flexibility and expandability depend on the robustness and reach of the interdiction technology developed by S-A. A key question, Moel notes, is how much bandwidth will be available for addressable channels. Right now the system doesn't operate across the full 550 MHz spectrum, he says, and this could be a drawback to adding new services on top of existing channels once lineups are in place.

Clearly, there is growing interest in the potential of off-premises distribution systems to put PPV on track. But just as clearly there's an impatience with those who see it as the all-or-nothing panacea. "The boxes are a problem, no doubt about it," Hussey says. "But the subscriber is willing to live with the problem, because that's the only way he gets what addressability provides right now. Every year, 10 percent of the subscriber base is being upgraded. If you're rebuilding, to not go addressable for the tiny increment it costs you makes no sense."

In Hussey's view the industry must move now to build its PPV universe,

because PPV and advertising sales represent the key growth areas for a business that is beginning to mature on the basic penetration front. "My personal feeling is that there is very strong evidence of a flattening in subscription pay business now, as well as a sensitivity to further advances in basic rates. Basic penetration is vibrant, but can we maintain the growth curve we've had in the past? This is an industry that has accustomed itself to growth, and I don't think we'll see the kind of growth the industry wants by relying on the additional increment that we can continue to eek out of basic."

Vito Brugliera, marketing vice president for Zenith's Cable Products Division, provides another reason why waiting for off-premises addressability to drive PPV may not be the smart thing to do. In his estimation, off-premises may not be the next answer on the horizon. "We keep looking at it," he says. "The concept sounds great, but, first of all, we wonder how, given the costs involved, this is going to cut into the existing base of boxes. And there are other things that hurt off-premises, such as the placement of active electronics out in the environment, the cost of adding ports to households that never subscribe and the fact that current interdiction systems are limited to 300 MHz."

Factored against such considerations, Brugliera says, are the near-term positive trends in set-top technology, including falling prices and the emergence of the IS-15 MultiPort standard, which can make the converter transparent to other equipment. "MultiPort is extremely friendly to the consumer," he notes. "We'll be installing MultiPort modules in over 1,000 boxes for testing in cable systems run by Centel, Viacom and Telecable in the next six months to a year."

Brugliera also notes that PPV ordering technology has matured to the point that operators can have their pick of approaches to fit their marketing schemes. "We are not hung up on one technology," he says, pointing out that the range of Zenith ordering products includes a proprietary ANI system, store and forward and full two-way. A big step forward, he says, has been adoption of a new data processing architecture which has "cut access to subscriber records to microseconds," because the data is stored in the active memory of 386-based PCs. Heretofore, he notes, "you had to go through the management system to get the information on the subscriber's status, and then to the controller to log the distribution order."

In Hal Krisbergh's opinion, the last thing the industry needs is to get hung up on is the best approach to addressability. "The key for us is we have the basic encryption and addressable technology to employ however the customer wants it to go. It's all the same to me. What the success of addressability to date has done is provide us with the resources to develop alternative approaches, and that's what we're doing."

To the cable operator who chooses to look a little into the future, the advice offered by Hussey, Brugliera and Krisbergh may be well worth thinking about. The telco vision of the electronic video store, with hundreds of movie titles accessable at the touch of a button, might be as blue sky today as PPV was in 1980, but technology and telecommunications services are moving ahead to the point that less visionary competitors to cable may have a shot at PPV much sooner than the telcos. In fact, it is the telcos who are helping to open such an opportunity through the rapid spread of ANI (automated number identification) services.

Bell Atlantic recently announced it was filing tariffs for CATV PPV order taking services in five states, following successful testing of such services with six cable companies. Ameritech already has tariffed PPV ordering services up and running in its Bell operating territories. And most other major telcos as well as AT&T are getting into the business.

According to Catherine Kinney, product manager for Ameritech's CATV Order Entry business, the growth of the service, priced at between 16 cents and 25 cents per call, has been slow so far. But she sees signs of rapid change. "I think PPV in the last year has really started to take off," she comments. "When we began these services, the people we talked to were system managers. Now we're talking to MSO managers about large-scale contracts."

Kinney says Ameritech sees a major

'The costs of addressability continue to be very high and its growth the next five years will lag significantly behind VCR growth. Our policy has been to roll out addressability at a moderate rate and not go fully forward. Operationally, our systems have been slow to implement new automation until the market demands it.'

— JoAnne Abbey, ATC director of marketing

'We still feel PPV will be an important revenue stream, particularly if we're reregulated. TCI won't tell us to do it or not. They'll let us make that decision and monitor its success, but they're just not ready to commit the capital until they have proof that PPV is a business.'

— Fred Vierra, president and COO of UA Entertainment

'The studios are careful. They don't want to hurt videocassette rentals, and right now they give PPV somewhat of a chance. I think the window issue will make or break PPV. If we can't get the windows changed, it won't work out.'

— Marvin Jones, president and CEO of UAE Cablesystems

■

'The size of the addressable base right now gives the cable industry the ability to compete effectively against the broadcast networks for blockbuster events. With a buy rate of well under 8 percent, at a price of about $15 for the event, the base is large enough to secure the top events in sports.'

— Hal Krisbergh

■

opportunity for ANI in the cable business, extending beyond PPV to the whole range of cable system interaction with customers. "The ability to use ANI to identify the calling party opens many possibilities," she says. Calls can be routed automatically, records for CSRs can be called up automatically, etc. In Ameritech's view, the PPV ordering process will be ever easier from an operational standpoint as the rest of the cable system's marketing and service operations are tied to automated call processing systems.

ANI isn't for everyone, of course, although some cable firms looking for low-capital intensive, low-personnel intensive approaches to PPV swear by it. "We're using ANI in 100 percent of our systems," says Telecable's Charles Kennamer. "It's working just fine, so we don't have any plans to change it." Cablevision Systems Corp., on the other hand, has tried it but doesn't cotton to it, says Al Johnson, director of technical operations. "Too often, the TV set is too far away from the phone jack, which means you have to install a jack or run extra cord through the house," he comments. Instead, the MSO, with over half of its subscriber base now addressable, relies on CSRs, ARUs and, in the case of the two-way plant in Brooklyn and Queens, Jerrold's Starview.

But ANI is sufficiently strong to have fostered development of specific products for CATV by a growing number of telcos, and this represents both an opportunity and a challenge to the cable industry. For the more ANI is out there, the easier it is going to be for anyone with a television signal to get into PPV.

One facilitator of this possibility is Larry Shultz, president of TickeTV, the Los Angeles-based marketer of the low-cost addressable technology developed by International Telesystems. Offering boxes at $5 to $15 per unit and "tickets," domino-size wafers employing a coded quartz filter for positive trapping that will cost about $2 each, TickeTV is hoping to break the cable TV PPV bottleneck by gaining broadcaster and cable operator cooperation in establishing a vast base for PPV event sales. "This is a new generation trap which, by using a laser beam shaped less than 500 Hz wide, allows us the option of over 7,000 combinations of interference paths," Shultz says. "It's not easy to defeat." Noting the growing appeal of PPV distribution to distributors of everything from 3-D movies to video games, Shultz asks, "Why wouldn't people get into the habit of going to their local convenience stores and buying a ticket?"

No one among the top MSO executives has given more support to PPV than Fred Vierra, president and COO of UA Entertainment, parent to UAE Cablesystems, which is the merged conglomerate of United, UA and Daniels cable systems now 52 percent owned by TCI. But he has to convince UAE Chairman Stewart Blair, a reputed skeptic, and the TCI hierarchy as well that the largely addressable base of the United Cable group is a model on

Showtime Event TV brought The Greatful Dead back to event PPV last month

■

which to build the giant MSO's future.

"We still feel PPV will be an important revenue stream, particularly if we're reregulated," Vierra says. "TCI won't tell us to do it or not. They'll let us make that decision and monitor its success, but they're just not ready to commit the capital until they have proof that PPV is a business."

Given the current pace of developments in PPV, that proof may not be long in coming.

—Craig Kuhl contributed to this article

Cable stocks will be hard pressed to continue outperforming the Dow

By Robert O'Brien

MSO/PROGRAMMER STOCK PERFORMANCE

Company	8/11/88 Price	8/11/89 Price	Change
Time Inc.*	$97.13	142.88	$+45.75
Turner Broadcasting	16.00	60.75	+44.75
Warner Communications*	33.50	67.50	+34.00
Multimedia	73.75	106.50	+32.75
Viacom	26.50	57.50	+31.00
Centel Cable	23.25	45.25	+22.00
Tele-Communications Inc.	21.13	37.50	+16.37
ATC	23.75	37.50	+13.75
Cablevision Systems	34.38	46.00	+11.62
Comcast	14.88	25.88	+11.00
QVC Network	9.86	20.25	+10.39
Times Mirror	30.38	40.63	+10.25
Adelphia Communications	19.50	28.50	+ 9.00
Cable Value Network	12.63	20.13	+ 7.50
Acton	13.13	20.13	+ 7.00
Century Communications	18.38	22.25	+ 3.87
Falcon Cable TV	19.88	20.50	+ .62
Home Shopping Network	3.50	3.63	+ .13
Financial News Network	7.00	6.88	- .12
UA	29.00	22.12	- 6.87
TCA Cable	31.50	20.00	- 11.50

* Stock values reflect pre-Time Warner merger

Wall Street's boom in early August, when the Dow Jones Industrial Index hit an all-time high, was said to been caused by small investors returning to the market for the first time since the '87 crash. Experts said the rise indicated that the financial community finally had shaken off Black Monday's lingering effects.

Analysts who follow the cable industry said some of the same factors that drove the overall market, principally the desire to cash in on prospective takeovers, have driven cable stocks to a level where they are outperforming even the robust Dow index.

Cable stocks, which declined to record lows this time last year, rose spectacularly through the close of 1988, and rode through the first half of this year on the shoulders of rumored takeovers and the possibility of further industry consolidation.

While the larger market remains volatile, cable stocks have stabilized. Analysts agree that the fundamentals of the business remain strong, and have forecast continuing appreciation for long-term investments, but Wall Street has reserved recommendations for short-term plays, saying that cable stock values—particularly for cable operators—are likely to perform with the market for the remainder of the year.

The appreciation in stock values comes against an especially vibrant backdrop. The Dow reached a record high of over 2,700 points just a day before it would have celebrated the second anniversary of the previous record. The similarities to the climate that led to the cataclysmic collapse of the stock market in October 1987 were striking, but, analysts reassured, differences were visible.

Back in 1987, Wall Street seemed to affirm that cable was recession-proof, and its stream of revenues predictable, an analysis that tended to deflect any concerns that the underlying value of cable systems and operations would erode.

But by the middle of last year, fears that interest rates would rise, and drag down the private market value of cable operations, coupled with concerns specific to the industry, began to winnow stock values.

On top of the concerns over interest rates, calls for reregulation—fueled by charges that cable operators were monopolists who gouged consumers with insupportable price increases—raced through Washington. Telephone companies, already anxious to eliminate restrictions to their entry into information and video service provision, used the opportunity to press their claims on lawmakers, while simultaneously implementing network construction plans that would enhance video delivery capabilities.

The threats rattled Wall Street's optimism for cable operations, and stock values began to fall. Halfway through 1988, an index of cable stocks stood at 1,600 points,

HARDWARE VENDOR STOCK PERFORMANCE

Company	8/11/88 Price	8/11/89 Price	Change
Pioneer Electronics	$53.25	$61.50	$+8.25
Scientific-Atlanta	13.63	19.50	+5.87
C-Cor Electronics	8.00	13.75	+5.75
General Instrument	30.00	33.38	+3.38
Augat	12.38	14.38	+2.00
Oak Communications	1.00	1.38	+ .38
RMS Electronics	2.00	1.25	- .75
Wavetek	5.75	5.00	- .75
Pico Products	2.00	1.13	- .87

while the Dow Index was out of sight at nearly 2,100.

By mid-summer, cable stocks were languishing. From early July, when the index of cable stocks dipped below 1,600 points for the first time, cable stocks underperformed in comparison to the Dow. Industry leaders like Tele-Communications Inc., trading at $21 a share, and American Television & Communications, at $25 a share, were trading at a fraction of the estimated breakup value of their operations.

At the same time, cable equipment manufacturers and distributors were just turning the corner after an extended period of moribund sales, and cable programmers had yet to receive what would later be seen as their due on Wall Street.

Yet throughout the period, analysts said, the values of cable systems continued to remain strong. Despite expectations that system sales prices would level off as a result of consolidation and constraints on the growth of subscriber revenues, the system marketplace remained brisk. Large system sales, including the sale of the New York Times system in New Jersey and the Viacom system on Long Island, evidenced the continued strength of the cable market, and focused investor attention on the breakup values of cable operations.

By year-end '88, cable stocks had closed the gap on market performance, and through the first half of 1989, stayed with the market as it climbed.

According to Ken Goldman, an analyst at Hanifen Imhoff Inc., an index of 10 cable operating company stocks is up 43.6 percent, almost twice the level of increase of the S&P 500, and a significant improvement over the 27 percent increase the cable industry registered in 1988.

Cable operators have managed to stem concerns that haunted the industry last year. Dennis McAlpine, an analyst at Oppenheimer & Co. Inc., said the widespread fear that the General Accounting Office's report on cable rate increases would uphold charges that the industry is monopolistic did not pan out.

"As is often the case, the anticipation is worse than the reality," McAlpine noted.

At the same time, the other persistent threat, from telco entry into the cable business, failed to materialize as promised. Despite bids by the National Telecommunications & Information Administration and by the Federal Communications Commission last year to ease restrictions on the former Bell Operating Companies, District Court Judge Harold Greene has stood firm on his determination to maintain prohibitions against telco provision of information or video services. The telcos have emerged neither as buyers of cable systems (with the exception of PacTel's equity position with Prime Cable in the purchase of Group W Cable in Chicago, which Greene has yet to approve) nor as an alternative service provider.

"The issues have been out on the table for a long enough time to have been discounted by the market," said Goldman. "I don't think any of the reregulation or telco talk surprises anyone on my side of the table. Right now, it's all been somewhat digested."

Then, too, analysts noted, concerns over interest rates have been erased. Capital for expansion and acquisitions has been as available as at any time in the industry's history, and trading through the first half of 1989 was as brisk as it was a year ago. In fact, 1988's total of $8 billion in system trading is likely to be surpassed in 1989, even though some deals—notably Telecable's stillborn effort to sell its top-25 system operation—disappeared from the market.

The evaporation of the cable industry's trouble spots has translated into stock increases almost across the board. At least nine publicly traded cable companies hit all-time highs for stock values during August. While some of those companies—including programmers like QVC and CVN, which are scheduled to merge—have those appreciations tied to one-time-only deals, others have advanced their stock value on the basis of operations.

Multimedia Inc., a programming producer and operator with more than 320,000 subscribers, established a record stock price of $106 a share in August, an increase of 32 points over its trading price on the same date a year ago, and more than

37 points higher than its 52-week low.

C-TEC Corp., a cable operator, currently is trading at more than twice its 52-week low figure, while Adelphia Communications, an active buyer of cable systems, reached a record high of $28.50 in August, an increase of nine points over a year ago and more than 20 points higher than its 52-week low.

Even operators who dove aggressively into the acquisitions market have garnered the support of Wall Street. Cablevision Systems, for example, shook off pressure from its $2,700-a-subscriber acquisition of Viacom's Long Island system, and is now trading at $46, more than 16 points higher than its 52-week low.

The reasons for the resiliency of the cable stock market, analysts said, was the soundness of the underlying fundamentals. According to a report prepared by Kenneth Berents, an analyst with Butcher & Singer, cable revenue is expected to climb by 14 percent in 1989, with more than half of that figure coming from basic service fees. An additional $1.7 billion should come from cable advertising, with growth from that revenue segment expected to rise through the early part of the next decade.

The contributions from basic service are significant, Berents pointed out, because that segment of the industry is growing faster than pay services, and because basic services are a more important contributor to operators' bottom lines.

Where operators return about half of the fees they garner from pay services to the programmers, operators keep about 85 percent of basic service fees. With the average monthly basic cable bill at $14.60 in 1989, operators are pulling a sizable chunk of revenue from what, at five percent increases per year, has been the fastest-growing segment of the cable industry.

As much as that performance has meant to operators, it has meant more to programmers and hardware manufacturers and distributors.

In fact, analysts agree that operator's stocks have run into the upper limits of their prospective appreciation. Hanifen Imhoff's Goldman said, "In general, I'm neutral toward the cable group because I feel the move has been more than healthy. The movement in stock prices through the first half of the year signals that a rest is due for this group of stocks. What we're saying is that we look at

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Hong Kong
Cable Communications Ltd.

a multi-national consortium comprised of

U S WEST — Denver
The Wharf (Holdings) Ltd. — Hong Kong
Sun Hung Kai Properties Ltd. — Hong Kong
Shaw Brothers Ltd. — Hong Kong
Coditel S.A. — Belgium

has been awarded broadcast and network licenses by the Hong Kong Government to provide Cable TV and telecommunications services to Hong Kong and the surrounding territories.

The undersigned assisted in the preparation of the franchise proposal and presentations to the Government and produced the packaging for both, in Hong Kong.

MALARKEY-TAYLOR ASSOCIATES
TELECOMMUNICATIONS FINANCIAL, INVESTMENT & ENGINEERING CONSULTANTS

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WASHINGTON, DC 20036
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FAX 01-734-4166

the cable group as being a market performer over the next six to nine months."

On the other hand, said Oppenheimer's McAlpine, "The programming stocks have done extremely well," having benefited from a strong upfront advertising market (**see chart, page 80**). With shares of broadcast network viewing down considerably, the competitive position of cable programming services has been enhanced, and operators have shown an increasing willingness to support the efforts of programming expansion. At the same time, constraints on channel capacity at the operating level have made reliance on entrenched programming suppliers even more critical.

Turner Broadcasting Systems, for example, hit a record stock price of $60 in August, more than three times its year-earlier value of $16. Fueled by the success of its introduction of Turner Network Television last fall, and by the continued contribution of CNN and TBS, Turner posted its first quarterly profit in three years, a move that pushed its stock value to the record level.

The gains in TBS stocks were underscored by a recent transaction. In August, TCI boosted its stake in TBS by buying 500,000 shares of TBS stock that Ted Turner had put on the market in early July. TCI, locked in at the July price, paid just $38.75 a share for stocks that, on the purchase date, were trading at over $50 a share.

Meanwhile, Viacom Inc., another notable performer with programming interests, has undergone a similar run-up. Viacom shares, which traded as low as $10 after the '87 crash and were hitting a then-record $28 a share a year ago, jumped to $50 a share earlier this year.

The boost was fueled by rumors that Viacom might cut a deal with acquisition-hunting Paramount Communications. When the deal didn't come, Viacom's values were expected to wane. While a short-term downturn did materialize—exacerbated by Viacom's decision to sue Time Inc. and Home Box Office for alleged anticompetitive practices—Viacom's stock rebounded, and in August reached a new high of $59.50.

Similarly, hardware companies have rebounded from doldrums of last summer to perform nearly as well as programming interests. Two of the largest manufacturers, General Instrument and Scientific-Atlanta, each already had begun restructuring pro-

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August 1989

Vista Communications Limited Partnership III

A limited partnership managed by
Vista Communications Inc.

$62,000,000
Debt & Equity

We served as advisors to Vista Communications Inc.
in this transaction.

DANIELS &ASSOCIATES

3200 Cherry Creek South Drive, Suite 500, Denver, CO 80209 303/778-5555
299 Park Avenue, New York, NY 10171 212/935-5900

Financial Services to the Cable Industry.

jects that focused the companies attentions on the broadband equipment market when experts predicted that 1989 would be a banner year for cable construction.

As a result, both companies saw rapid appreciation in their stock values. Scientific-Atlanta, which had been trading at $14 a share last year, is now verging on $20. General Instrument, which was trading in the low $20s, is now in the mid $30s.

And there may be more to come for hardware companies. An executive of General Instrument noted that the market has yet to respond to the company's recent repurchase of 20 percent of its outstanding shares, a move completed in August. And a spokesman for Scientific-Atlanta said that company's improvement has been tied more to its restructuring, and hasn't yet absorbed the benefits of the construction boom.

At the same time, expectations of continued trafficking in media properties has helped boost the stock values of cable companies thought to be in play. The home shopping services QVC and CVN, which agreed to merge in July, have each hit a record high around $20 a share.

Stock Market

EXCH	COMPANY	CLOSING QUOTE 09/11/89	CLOSING QUOTE 09/04/89	NET CHANGE IN PERIOD	PERCENT CHANGE IN PERIOD	P/E RATIO	ANNUAL DIV	ANNUAL YLD%	EARNINGS PER SHARE	52 WEEK HIGH	52 WEEK LOW
MSOs & PROGRAMMERS											
ASE	ACTON	20.13	19.75	0.38	-1.89	99	0.00	—	0.20	24.13	11.00
OTC	ADELPHIA COMM.	28.50	28.25	-0.25	-0.88	—	0.00	—		28.50	8.50
OTC	AMERICAN TELE & COMM.	37.50	49.25	11.75	31.33	—	0.00	—		53.25	21.75
ASE	CABLEVISION SYS (a)	46.00	44.25	-1.75	-3.80	—	0.00	—		47.25	29.75
OTC	C-TEC CORP	22.75	22.25	-0.50	-2.20	9	0.00	—	2.49	23.75	11.25
ASE	CENTURY COMMUNICATIONS	22.25	22.25	0.00	0.00	—	0.00	—		23.13	12.00
OTC	COMCAST	25.88	28.13	2.25	8.89	—	0.12	0.43		28.13	13.75
OTC	CVN	20.13	20.00	0.00	0.00	—	0.00	—		20.13	11.50
NYS	DISNEY(H)	118.00	117.25	1.25	1.06	27	0.48	0.41	4.35	117.25	80.00
ASE	FALCON	20.50	20.63	0.13	0.63	—	2.12	10.28		22.13	19.63
OTC	FINANCIAL NEWS NET.	6.88	7.00	0.12	1.74	30	0.00	—	0.23	10.50	5.13
ASE	GALAXY	25.38	24.75	-0.63	-2.48	83	1.20	5.25	0.30	25.38	17.00
ASE	HOME SHOPPING NETWORK	3.63	3.63	0.00	0.00	15	0.00	—	0.24	6.75	3.38
OTC	JONES INTERCABLE	18.25	18.50	-0.75	-3.90	—	0.00	—		19.25	11.00
ASE	JONES INTERCABLE INV	15.00	14.88	-0.12	-0.80	18	1.80	10.75	0.85	15.63	14.13
NYS	KNIGHT-RIDDER INC(H)	56.00	57.25	1.25	2.23	23	1.22	2.13	2.46	57.25	42.88
NYS	MCA	68.75	68.13	-2.62	-3.81	29	0.88	1.03	2.38	68.75	45.38
OTC	MEDIA GENERAL	37.75	37.88	0.13	0.34	22	0.40	1.06	1.74	40.50	33.25
OTC	MULTIMEDIA	106.50	105.00	-1.50	-1.41	83	0.00	—	1.27	106.50	68.00
OTC	NOSTALGIA CHANNEL	2.13	2.25	0.12	5.63	—	0.00	—		8.00	0.50
ASE	NEW YORK TIMES	32.38	33.00	0.62	1.91	16	0.48	1.45	2.02	34.75	24.38
NYS	PLAYBOY ENTERPRISES	14.00	14.38	0.38	2.71	96	0.00	—	0.15	14.88	12.13
OTC	QVC	20.25	19.88	-0.37	-1.83	—	0.10	0.50		20.25	8.00
OTC	SCRIPPS HOWARD BRDCST	75.00	75.00	0.00	0.00	—	1.00	1.33		85.00	57.50
OTC	TCA CABLE TV	20.00	18.88	-1.12	-5.60	37	0.40	2.12	0.51	20.75	28.50
OTC	TELE-COMMUNICATIONS	37.50	38.13	0.63	1.68	—	0.00	—		39.75	20.38
NYS	TIME INC.	142.88	140.38	-2.50	-1.75	28	1.00	0.71	4.96	162.75	103.63
NYS	TIMES MIRROR	40.63	42.00	1.37	3.37	17	1.00	2.38	2.53	45.00	32.38
NYS	TRIBUNE CO.	58.75	60.25	1.50	2.55	21	0.88	1.46	2.86	61.63	36.38
ASE	TURNER BROADCASTING	60.75	53.63	-7.12	-11.72	—	0.00	—		60.75	17.00
OTC	UNITED ARTISTS ENTER.	22.13	21.88	-0.25	-1.13	37	0.00	—	0.59	22.13	14.75
ASE	VIACOM	57.50	56.75	-0.75	-1.30	—	0.00	—		59.50	30.50
NYS	WARNER COMM.	67.50	64.88	-2.62	-3.88	24	0.88	1.05	2.86	67.50	36.38
OTC	WASHINGTON POST BRDCST	288.13	287.75	-1.38	-0.48	12	1.96	0.65	24.52	288.50	204.00
OTC	WESTMARC	29.25	29.38	0.13	0.44	37	0.00	—	0.79	30.75	16.50
SERVICE & FINANCIAL COMPANIES											
OTC	BURNUP & SIMS	21.63	20.00	-1.63	-7.54	43	0.00	—	0.46	24.63 *	13.00
NYS	CAPITAL CITIES	518.13	507.50	-10.63	-2.05	29	0.20	0.04	22.48	530.00	304.50
NYS	PARAMOUNT	61.13	58.50	-2.63	-4.30	21	1.40	2.39	2.86	63.25	39.50
MANUFACTURERS & DISTRIBUTORS											
OTC	ARTEL (H)	6.63	8.13	1.50	22.62	—	0.00	—		8.13	1.50
NYS	ARVIN	20.38	20.75	0.37	1.82	15	0.88	3.25	1.41	26.75	17.63
NYS	AUGAT	14.38	14.00	-0.38	-2.64	25	0.40	2.86	0.57	15.38	10.50
OTC	CABLE EXCHANGE	0.88	0.88	0.00	0.00	—	0.00	—		5.38	0.88
OTC	C-COR ELECTRONICS	13.75	12.75	-1.00	-7.27	21	0.00	—	0.60	18.50	3.75
NYS	CONTEL CORP.	69.75	69.50	-0.25	-0.36	115	2.20	3.46	0.55	69.75	32.00
OTC	GANDALF TECH.	8.50	8.00	-0.50	-7.89	9	0.00	—	0.84	7.75	3.88
NYS	GENERAL INSTRUMENT	33.38	31.75	-1.63	-4.88	12	0.60	1.57	2.55	37.25	21.25
OTC	GRAPHIC SCANNING	11.25	11.13	-0.12	-1.07	9	0.00	—	1.24	12.00	5.75
NYS	HARRIS CORP.	33.88	34.88	1.00	2.95	13	0.88	2.52	2.74	35.00	25.00
NYS	M/A-COM	7.25	7.13	-0.12	-1.66	13	0.24	3.37	0.53	9.38	7.50
NYS	OAK INDUSTRIES	1.38	1.38	0.00	0.00	12	0.00	—	0.12	1.88	0.75
ASE	PICO PRODUCTS	1.13	1.13	0.00	0.00	—	0.00	—		2.75	1.25
NYS	PIONEER ELECTRONICS	61.50	61.50	0.00	0.00	42	0.16	0.29	1.47	61.50	48.50
OTC	RADIATION SYSTEMS	9.63	10.38	0.75	7.79	14	0.10	0.96	0.73	10.38	7.50
ASE	RMS INTERNATIONAL	1.25	1.25	0.00	0.00	31	0.00	—	0.04	2.50	1.88
NYS	SCIENTIFIC-ATLANTA	19.50	20.50	1.00	5.13	15	0.12	0.59	1.41	20.50	12.63
OTC	WEGENER(H)	3.50	3.63	0.13	3.71	363	0.00	—	0.01	3.63	3.25
NYS	TEKTRONIX	22.25	21.63	-0.62	-2.79	120	0.60	2.77	0.18	24.25	20.25
NYS	VARIAN ASSOCIATES	27.50	27.50	0.00	0.00	12	0.28	0.85	2.23	30.63	24.38
OTC	WAVETEK	5.00	5.13	0.13	2.50	—	0.00	—		7.50	5.00

MARKET DIARY:

ADVANCES	21
DECLINES	28
UNCHANGED	10
NEW HIGHS	5
NEW LOWS	0

LARGEST DOLLAR GAINER....American Tele. & Comm. . . . +$11.75
LARGEST DOLLAR LOSER....Capital Cities . . . . . −$ 10.63
LARGEST PERCENTAGE GAINER....American Tele. & Comm. +31.33%
. . . . . .
LARGEST PERCENTAGE LOSER....Turner Broadcasting . . . −11.72%

(H) = NEW HIGH IN PERIOD
(L) = NEW LOW IN PERIOD
(d) = DEFICIT
(a) = reflects stock split

ALL OTC QUOTES ARE REPRESENTED BY THE BID PRICE

Provided by David J. Siegel, Shearson Lehman Hutton, Inc (212) 984-8951, (800)843-0211. The information contained in this report has been taken from trade and statistical services and other sources which we deem reliable. We do not represent that it is accurate or complete. The information is subject to change.

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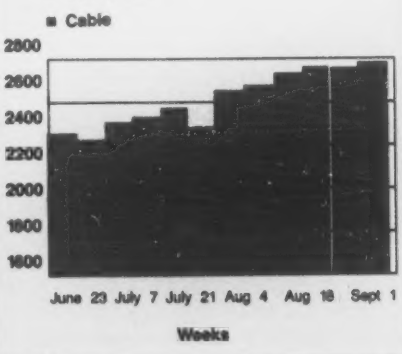
CableVision Stock Index



Similarly, United Artists Entertainment, formed earlier this year through the merger of three cable operators, remains volatile, and analysts said opportunities for short-term gains from an investment in UAE remain available.

Other stocks could run up if rumored transactions come to pass. For example, Cablevision Systems, which took a position in Time Inc. prior to its acquisition of Warner Communications, is now said to be taking a position in Paramount. While analysts discount any chance that Cablevision could gain control of Paramount, the chance that a yet-unannounced buyer could emerge for the entertainment concern continues to loom, and could drive up the value of Cablevision's investment and the stock value of the company itself.

The single exception to analysts' predictions of a short-term performance at the market's level is the handful of cable operators with interests in cellular radio. According to Goldman, companies with cellular interests will outperform the market, led by Century Communications and Comcast. Both currently trade in the mid-20s.

Otherwise, Wall Street has said, cable stocks, now leveling off at about a 35 percent discount to their private market value, figure to stay strong for the remainder of the year, but aren't expected to afford an appreciable short-term investment. ■

Financial/Stocks

• **Tele-Communications Inc.** has completed its first investment in pay-per-view development last month, joining **Continental Cablevision** as a minority shareholder in the anti-taping technology of **Eidak Corp.** Equity specifics were not released. ■

May, 1989

SOLD

Certain assets of

SPECCHIO CABLEVISION CO.
IMAGES TV INC.
GRUNDY COUNTY CABLEVISION
CABLEVISION FOR RANTOUL INC.

serving approximately 8,000 cable t.v. subscribers in Illinois, Iowa, and Indiana have been sold to

SPECCHIO PAY TELEVISION LIMITED PARTNERS

a Partnership organized by

GULF AMERICAN CABLE GROUP

of Baton Rouge, Louisiana

COMMUNICATIONS EQUITY ASSOCIATES

This Announcement Appears As a Matter of Record Only.

March 1989

SOLD

Home Cablevision Co.

525 Basic Subscribers in the Community of Madelia, Minnesota

Has Been Acquired By

Amzak Cable Midwest, Inc.

The Undersigned Represented the Seller.

CableInvestments, Inc.
8400 East Prentice Avenue, Suite 1115
Englewood, Colorado 80111
(303) 793-3344

Cable Network Ad Performance

June 1989 billings	June 1988 billings	Year-to-year dollar change	Year-to-year percent change
$75,155,526	$51,341,094	$23,814,432	31.6%

Top 10 cable net sponsors/June 1989

1.	Procter & Gamble	$3,156,493	6.	Time Warner Inc.	$1,473,957
2.	RJR Nabisco/KKR	2,518,196	7.	General Motors	1,473,887
3.	Anheuser-Busch	2,053,171	8.	Eastman Kodak	1,216,070
4.	Philip Morris	1,833,694	9.	Mars Inc.	1,145,442
5.	General Mills	1,580,883	10.	Clorox	1,043,734

Top 10 cable net sponsors/2nd Quarter 1989

1.	Procter & Gamble	$8,652,606	6.	Time Warner Inc.	$5,464,675
2.	Philip Morris	7,650,088	7.	Clorox	3,999,843
3.	RJR Nabisco/KKR	6,841,270	8.	Mars Inc.	3,850,555
4.	Anheuser Busch	5,739,966	9.	Eastman Kodak	3,669,394
5.	General Motors	5,464,675	10.	General Mills	3,523,315

Source: Broadcast Advertising Reports data; figures represent combined billings of CNN, ESPN, Family Channel, MTV, USA and TBS Superstation

	2nd Qtr. 1989 billings	2nd Qtr. 1988 billings	Year-to-year dollar change	Year-to-year percent change
CNN	$37,654,135	$26,424,352	$11,229,783	29.8%
ESPN	36,796,752	28,468,804	8,327,948	22.6%
FAMILY*	26,066,547	17,371,333	8,695,214	33.3%
MTV	24,815,874	20,728,252	4,087,622	16.4%
TBS	80,283,799	59,717,708	20,566,091	25.6%
USA	39,926,990	25,983,804	13,943,186	34.9%

*Family is new name for The Family Channel, previously CBN Family Channel
Source: Broadcast Advertising Reports data

Subscriber Universe Estimates

	Total TV households	Cable TV households	Homes passed	Cable percent of TV households
A.C. Nielsen	92,100,000	50,897,080	N.A.	56.4%
Arbitron	90,000,000	49,039,500	N.A.	54.5%
Paul Kagan Associates	89,000,000	45,900,000	76,900,000	51.1%

Subscriber numbers as of Aug. 1989
Nielsen figures include Alaska & Hawaii

Top 100 MSO's

Rank	Multiple system operator	Basic subs	
1.	Tele-Communications Inc.	6,228,526	(6/89)
2.	American Television & Communications Corp.	4,100,000	(4/89)
3.	UA Entertainment	2,642,729	(6/89)
4.	Continental Cablevision	2,404,000	(5/89)
5.	Warner Cable Communications	1,596,000	(6/89)
6.	Storer Cable Communications	1,530,700	(1/89)
7.	Cox Cable Communications	1,501,500	(4/89)
8.	Comcast	1,463,000	(5/89)
9.	Cablevision Systems	1,378,699	(8/89)
10.	Jones Intercable/Spacelink	1,190,728	(8/89)
11.	Newhouse Broadcasting	1,147,000	(5/89)
12.	Heritage Communications	1,100,000	(4/89)
13.	Times Mirror Cable TV	997,156	(1/89)
14.	Cablevision Industries	962,650	(8/89)
15.	Viacom Cable	955,000	(4/89)
16.	Sammons Communications	853,900	(4/89)
17.	Century Communications	800,000	(4/89)
18.	Cooke Cablevision	730,800	(5/89)
19.	Adelphia Communications	721,700	(5/89)
20.	Paragon Communications	703,000	(1/89)
21.	Falcon Cable TV	632,500	(3/89)
22.	Centel Cable	603,222	(6/89)
23.	Telecable	590,000	(5/89)
24.	WestMarc Communications	558,702	(7/89)
25.	KBLCOM	558,100	(4/89)
26.	Scripps-Howard	531,000	(3/89)
(30) 27.	Tele-Media	504,300	(7/89)
(27) 28.	Multivision Cable TV	482,000	(4/89)
(28) 29.	Prime Cable	458,000	(6/89)
(29) 30.	Post-Newsweek Cable	403,000	(4/89)
31.	Lenfest Group	365,915	(5/89)
32.	Maclean Hunter Cable TV	357,500	(5/89)
33.	TCA Group	349,300	(4/89)
34.	Rifkin & Associates	324,000	(4/89)
35.	Multimedia Cablevision	321,300	(4/89)
36.	Colony Communications	312,900	(4/89)
37.	TKR Cable	278,482	(5/89)
38.	Triax Communications	277,500	(6/89)
39.	Western Communications	266,700	(4/89)
40.	Cencom Cable	258,980	(7/89)
41.	Star Cablevision Group	254,000	(1/89)
42.	Hauser Communications	247,000	(7/89)
43.	Simmons Communications	246,690	(1/89)
44.	Service Electric Cable TV Inc.	211,500	(4/89)
45.	Greater Media	188,700	(3/89)
46.	Harron Communications	177,700	(3/89)
47.	Media General	176,068	(6/89)
48.	Sutton Capital	174,060	(6/89)
49.	Columbia International	174,000	(4/89)
50.	Palmer Communications	160,551	(5/89)
51.	Insight Communications	157,700	(4/89)
52.	U.S. Cable Corp	154,300	(3/89)
53.	Armstrong Utilities	151,800	(3/89)
54.	King Videocable	141,158	(1/89)
55.	Northland Communications	137,148	(4/89)
56.	Summit Communications	136,600	(3/89)
57.	Bresnan Communications	127,351	(1/89)
58.	Booth Communications	119,000	(1/89)
59.	Sonic Communications	117,551	(5/89)
60.	McDonald Group	115,200	(4/89)
61.	Susquehanna Broadcasting	113,200	(2/89)
62.	United Video Management	106,000	(3/89)
63.	Pencor Services	100,400	(2/89)
64.	First Carolina Communications	99,500	(3/89)
65.	Midcontinent Cable Systems Co.	95,550	(6/89)
66.	WEHCO Video	93,900	(4/89)
67.	Gilbert Media	85,000	(6/89)
68.	Coaxial Communications	80,000	(5/89)
69.	Selkirk Communications	77,500	(3/89)
70.	James Cable Partners	70,000	(4/89)
71.	Douglas Communications	64,100	(3/89)
72.	Barden Cablevision	62,700	(3/89)
73.	Cardinal Comunications	60,500	(6/89)
(79) 74.	Prestige Cable TV Inc.	60,410	(7/89)
(74) 75.	Omega Communications	60,000	(8/89)
(75) 76.	Helicon Corp.	59,000	(8/89)
(76) 77.	C-TEC Cable Systems	58,600	(5/89)
(77) 78.	Hearst Communications Of California	58,200	(5/89)
(78) 79.	Fanch Communications	58,000	(6/89)
80.	Telesat Cablevision Inc.	57,235	(6/89)
81.	State Cable TV	54,700	(5/89)
82.	Leonard Communications	53,000	(8/89)
83.	Bachow & Elkin Communications	51,700	(1/89)
84.	Galaxy Cablevision	51,700	(3/89)
85.	Joseph Gans Cable TV	50,000	(8/89)
86.	New England Cablevision	49,000	(4/89)
87.	Republic Communications Corp.	48,000	(5/89)
88.	Rock Associates	47,500	(3/89)
89.	Donrey Media Group	47,500	(3/89)
90.	360 Corp.	45,000	(5/89)
91.	CableSouth Inc.	42,100	(2/89)
92.	CableAmerica	42,000	(2/89)
93.	Masada Corp.	42,000	(8/89)
94.	Star Cable Associates	42,000	(8/89)
95.	Eastern Connecticut Cable TV	41,820	(6/89)
96.	Cable Holdings Inc.	41,800	(3/89)
97.	C4 Media	41,275	(7/89)
(new) 98.	Reystay Co.	40,447	(8/89)
(98) 99.	Acton Corp.	40,400	(3/89)
(99) 100.	Fairbanks Communications	36,400	(3/89)

( ) Rank last listing

Subscriber counts are provided by MSOs and systems to Cable Vision. *Figures will be updated quarterly unless information is provided by MSOs or systems. Send updates to Cable Stats, 345 Park Avenue So., 9th Floor, New York, NY 10010.*

Top 100 Systems

Rank	Location	Operator	Basic subs	
1.	Long Island, NY	Cablevision Systems	474,898	(8/89)
2.	San Diego, CA	Cox Cable	301,765	(4/89)
3.	Orlando/Melbourne, FL	ATC	298,000	(2/89)
4.	San Antonio, TX	KBLCOM	234,835	(6/89)
5.	Manhattan, NY	ATC	231,864	(6/89)
6.	Puget Sound, WA	Viacom	225,800	(6/89)
7.	Phoenix, AZ	Times Mirror	220,968	(5/89)
8.	East Orange, NJ	Maclean Hunter	212,000	(6/89)
9.	Houston, TX	Warner	207,000	(6/89)
10.	Honolulu, HI	ATC	202,000	(1/89)
11.	Dover/Morristown, NJ	Sammons	178,336	(6/89)
12.	Chicago (suburbs), IL	Centel	177,208	(2/89)
13.	Wayne, NJ	UA Entertainment	175,376	(7/89)
14.	Cincinnati, OH	Warner	167,000	(6/89)
15.	Rochester, NY	ATC	167,000	(1/89)
16.	Atlanta, GA	Prime Cable	166,329	(5/89)
17.	Cleveland, OH	Cablevision Systems	165,842	(8/89)
18.	Fairfax, VA	Media General	164,519	(6/89)
19.	Louisville/Jeff. Co., KY	Storer Communications	163,722	(1/89)
20.	Hampton Roads, VA	Cox Cable	162,964	(3/89)
21.	Cherry Hill, NJ	NYT	162,000	(1/89)
22.	Connecticut Complex	Cablevision Systems	157,148	(8/89)
23.	Jacksonville, FL	Continental Cablevision	154,600	(5/89)
24.	Hartford/Plainville/Vernon, CT	UA Entertainment	152,683	(6/89)
25.	Chicago, IL	TCI	148,857	(4/89)
26.	Memphis/W. Memphis, TN	ATC	148,600	(1/89)
27.	Kansas City, MO	ATC	147,000	(2/89)
28.	San Jose/Campbell, CA	Heritage	145,000	(6/89)
29.	Baltimore County, MD	Comcast	144,000	(6/89)
30.	Manhattan, NY	Paragon	143,500	(6/89)
31.	Tulsa, OK	UA Entertainment	140,015	(6/89)
32.	Buffalo, NY	Adelphia Comm.	139,515	(2/89)
33.	Denver (suburbs), CO	UA Entertainment	139,305	(6/89)
34.	Charlotte, NC	ATC	139,000	(1/89)
35.	Pompano, FL	Continental	136,791	(2/89)
36.	St. Louis, MO	Comcast	135,039	(6/89)
37.	San Francisco, CA	Viacom	134,000	(6/89)
38.	Brooklyn/Queens, NY	Warner	132,500	(6/89)
39.	San Diego, CA	ATC	132,000	(1/89)
40.	Martin/Stuart Co, FL	Centel	129,460	(7/89)
41.	Seattle, WA	TCI	120,518	(1/89)
42.	Austin, TX	ATC	120,000	(1/89)
43.	Warren, NJ	TKR	119,358	(7/89)
44.	Pinellas County, FL	Newhouse	114,000	(6/89)
45.	Wilmington, DE	Heritage	112,000	(6/89)
46.	Tacoma, WA	Viacom	112,000	(6/89)
47.	Grand Rapids, MI	UA Entertainment	111,198	(6/89)
48.	San Diego County, CA	Times Mirror	111,069	(5/89)
49.	Toledo, OH	Blade Communications	110,785	(5/89)
50.	Southeast Michigan	Comcast	110,000	(6/89)
51.	Chicago Suburbs, IL	Centel	109,576	(5/89)
52.	Las Vegas, NV	Prime Cable	107,288	(5/89)
53.	Dallas, TX	Heritage	107,244	(6/89)
54.	San Juan, PR	Multivision Cable	106,046	(6/89)
55.	Jefferson Parish/Kenner, LA	Cox Cable	105,811	(3/89)
56.	Indianapolis, IN	Comcast	104,000	(6/89)
57.	Raleigh/Durham, NC	ATC	104,000	(1/89)
58.	Boston/Brookline, MA	Cablevision Systems	102,130	(8/89)
59.	Nashville, TN	Viacom	101,500	(6/89)
60.	Hillsborough/Tampa, FL	Paragon	100,281	(2/89)
61.	Chicago, IL	Group W	98,700	(5/89)
62.	Richmond, VA	Continental	97,935	(1/89)
63.	Jackson, MS	ATC	97,000	(1/89)
64.	Pittsburgh, PA	TCI	96,712	(1/89)
65.	St. Petersburg, FL	Paragon	95,412	(2/89)
66.	Monmouth, NJ	Sutton Capital	94,970	(6/89)
67.	Naples, FL	Palmer	94,450	(6/89)
68.	Reading, PA	ATC	94,000	(1/89)
69.	Worcester Complex, MA	Greater Media	92,148	(1/89)
70.	Milwaukee, WI	Warner	92,000	(6/89)
71.	Portland, OR	KBLCOM	91,500	(8/89)
72.	Greensboro, NC	ATC	91,000	(1/89)
73.	Dade/Broward County, FL	Storer	90,000	(8/89)
74.	Independence,MO	Jones	88,628	(8/89)
75.	Wichita, KS	Multimedia	87,351	(1/89)
76.	Tucson, AZ	Cooke	86,976	(8/89)
77.	Harrisburg, PA	Sammons	85,200	(8/89)
78.	Columbus, OH	Warner	85,000	(6/89)
79.	Baton Rouge, LA	UA Entertainment	84,976	(6/89)
80.	Orange County, CA	KBLCOM	84,545	(7/89)
81.	Fresno, CA	Continental	84,217	(6/89)
82.	Akron, OH	Warner	84,000	(6/89)
83.	Montgomery County, MD	Hauser	84,000	(8/89)
84.	Albuquerque, NM	Jones Intercable	83,119	(5/89)
85.	Fayetteville, NC	ATC	83,000	(1/89)
86.	South Bend, IN	Heritage	82,744	(6/89)
87.	Houston Suburbs, TX	Prime Cable	82,000	(6/89)
88.	Medford Complex Boston Suburbs, MA	Warner	82,000	(6/89)
89.	Oakland County, MI	UA Entertainment	80,564	(8/89)
90.	Indianapolis, IN	ATC	80,000	(1/89)
91.	Providence/Warwick, RI	Times Mirror	78,528	(6/89)
92.	New Orleans, LA	Cox Cable	78,493	(3/89)
93.	Allentown, PA	Service Electric	78,000	(8/89)
94.	Ventura, CA	Western	78,700	(8/89)
95.	Oklahoma City, OK	Cox Cable	77,014	(3/89)
96.	South Texas, TX	Heritage	75,560	(6/89)
97.	Omaha, NE	Cox Cable	74,472	(3/89)
98.	Pleasant Hill, CA	WestMarc	74,401	(7/89)
99.	Little Rock, AR	Storer	74,274	(6/89)
100.	Birmingham, AL	ATC	73,500	(5/89)